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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/511,188

Applicant(s)

GHIRARDI, MAURIZIO

Examiner

ANDREW OH

Art Unit

2419

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-30 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 12 October 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/5508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

1. DETAILED ACTION

2. Oath/Declaration

3. The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in **37 C.F.R. 1.63**.

4. Priority

5. As required by **M.P.E.P. 201.14(c)**, acknowledgement is made of applicant's claim for priority based on applications filed on 04/08/2003 (PCT/EP03/03625) and filed 04/12/2002 (TO2002 A 000 325).

6. Specification

7. Applicant is reminded of the proper language and format for an abstract of the disclosure.

8. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

9. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

10. The abstract of the disclosure is objected to because it contains legal phraseology "comprising", "method", and "said". In addition, the abstract appears to be a recitation of the claims, is not in narrative form and does not adequately summarize

the invention in such a way as to apprise an individual and grant a broad understanding. Correction is required. See MPEP § 608.01(b).

11. Claim Objections

12. Claim 3 is objected to because of the following informalities: (M on Ln.6 is missing the closing parenthesis. Appropriate correction is required.

13. Claim 11 is objected to because of the following informalities: instantiating is misspelled on Ln.7. Appropriate correction is required.

14. Claim 12 is objected to because of the following informalities: {B1, BN} on Ln.5 is opened with a brace instead of a parenthesis. Appropriate correction is required.

15. Claim 21 is objected to because of the following informalities: 10 on Ln.10 is missing the open and close parenthesis; {202} on Ln.10 is opened with a brace instead of a parenthesis; and .the on Ln.10 has a period in front of it. Appropriate correction is required.

16. Claim 22 is objected to because of the following informalities: {104} on Ln.4 is opened with a brace instead of a parenthesis. Appropriate correction is required.

17. Claim 24 is objected to because of the following informalities: {212} on Ln.8 is opened with a brace instead of a parenthesis. Appropriate correction is required.

18. Claim 25 is objected to because of the following informalities: {104} on Ln.4 is opened with a brace instead of a parenthesis. Appropriate correction is required.

19. Drawings

20. The drawings are objected to because fig. 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12 require descriptive text labels. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

21. The drawings are objected to because fig.14 has hexadecimal misspelled as "Exadecimal". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The

figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

22. Claim Rejections - 35 USC § 101

23. 35 U.S.C. 101 reads as follows:

24. Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

25. Claim 30 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 30 is directed towards a software module comprising software code. The claim must be directed to a computer-readable medium which when executed by a processor performs a series of steps.

26. Claim(s) 1-28 is/are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to particular

machine, or (2) transform underlying subject matter (such as an article or material) to a different state or thing. See *In re Bilski*, 88 USPQ2d 1385, 1391 (Fed. Cir. 2008). The instant claims are neither positively tied to a particular machine that accomplishes the claimed method steps nor transform underlying subject matter, and therefore do not qualify as a statutory process. The claimed method including steps of "providing at least one intermediate object ... said management activity" is broad enough that the claim could be completely performed mentally, verbally or without a machine nor is any transformation apparent. Other examples include "providing said data set ... to said intermediate object" and "transferring said set of results ... to said at least one manager object".

27. Claim Rejections - 35 USC § 112

28. The following is a quotation of the second paragraph of 35 U.S.C. 112:

29. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

30. Claim 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

31. Claim 1 recites the limitation "said data set (1100)" in line 10. There is insufficient antecedent basis for this limitation in the claim.

32. Regarding claim 15, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

See MPEP § 2173.05(d).

33. Claim 23 recites the limitation "the original file size" in line 8. There is insufficient antecedent basis for this limitation in the claim.

34. Claim Rejections - 35 USC § 102

35. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

36. A person shall be entitled to a patent unless –

37. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

38. Claims 1, 29, 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujino (US-5651006).

39. As to claims 1, 29, 30: Fujino teaches a method managing a management activity of at least one managed object (Bi, ..., BN) by at least one manager object through a communication network (R), characterized in that it comprises the following steps: - providing at least one intermediate object (AG) configured to manage said at least one managed object (Bi,..., BN) according to a data set (1102) (**fig.2, 10, 20, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67: sub-manager manages agents and collects information from them in order to post them to the integration manager**), said management activity being transformed into a set of results (1112) (**abstract, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67: integration issues request to sub-manager which results in returned data collected from agents**), - providing said data set (1100) from said at least one manager object (A) to said intermediate object (AG)

(col.2, ln.60 - col.3, ln.19 and col.6, ln.55-67: SNMP / reference request from integration manager), - managing said at least one managed object (B1,..., Bn) through said at least one intermediate object (AG), to generate said set of results (abstract, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67: post management objects from sub-manager to integration manager, management objects having been obtained from agents), and - transferring {1108} said set of results from said at least one intermediate object (AG) to said at least one manager object (A) (abstract, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67: post management objects from sub-manager to integration manager, management objects having been obtained from agents).

40. Claim Rejections - 35 USC § 103

41. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

42. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

43. Claims 2-5, 7, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino (US-5651006) as applied to claim 1 above, and further in view of Rozman (US-5438614).

44. As to claim 2: Fujino teaches the method according to claim 1, which comprises the step of establishing the communication between said at least one manager object

(A) and said at least one intermediate object (**abstract, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67: post management objects from sub-manager to integration manager, management objects having been obtained from agents**).

45. Fujino may not explicitly teach via UDP protocol.

46. Rozman teaches via UDP protocol (**col.43, ln.54-59: SNMP over UDP**).

47. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Rozman into Fujino since Fujino suggests SNMP nodes communicating using SNMP messages (**fig.1, fig.2**) in general and Fujino suggests SNMP transmitted over UDP, the motivation being to provide for better interoperability (**col.43, ln.54-59: SNMP over UDP**).

48. As to claim 3: Fujino teaches the method according to claim 2 which comprises the following steps: - managing at least one further managed object (Bk. 25 Bn) (**fig.2, 10c**) directly through said at least one manager object (M (**fig.2, 50**), and - managing said at least one managed object (B1, B2, B3) (**fig.2, 20**) by said at least one manager object (A) (**fig.2, 50**) via said intermediate object (AG) (**fig.2, 10a, abstract, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67**).

49. As to claim 4: Fujino teaches the method according to claim 3, comprises the management of said at least one further managed object (Bk, ..., Bn) (**fig.1, 20-1. 20-2**) and said at least one managed object (B1, B2, B3) (**fig.2, 20**) through a single communication network (R) (**fig.1, 3**).

50. As to claim 5: Fujino teaches the method according to claim 3, which comprises the following steps: - providing a first communication network (RP) for managing said at least one further managed object (B1) (**fig.1, 20-1. 20-2**) directly through said at least one manager object (A) (**fig.1, 50**) and transferring said data set (1100) and said results set (1118) between said at least one manager object (A) and said at least one further managed object (Bi) (**col.5, ln.62 – col.6, ln.4: integration manager manages agents directly connected to it through LAN3**), and - providing a second communication network (RA) for managing said at least one managed object (B2, B3) through said intermediate object (AG) (**abstract, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67, and fig.1, 1, 2: manage agents through sub-managers on LAN1 and LAN2**).

51. As to claim 7: Fujino teaches the method according to claim 3 wherein said intermediate object (AG) is provided with respective reception modules (AU) and transmission modules (ATX) configured (**fig.2, 10 and col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67: transmission and reception of information of AG between manager and agent**) so that said at least one manager object (A) sees said intermediate object (AG) essentially as one of said managed objects (Bi, ..., Bn) (**col.3, ln.1-5: integration manager views sub-manager as an agent**).

52. As to claim 8: Fujino teaches the method according to any claim 3 wherein said at least one intermediate object (AG) comprises at least one respective management

module (MM) (**fig.3, 150**) configured so that said at least one managed object (BI, .. , BN), which is managed by said at least one intermediate object (AG), sees said at least one intermediate object (AG) essentially as said at least one manager object (A) (**col.3, ln.1-5, col.8, ln.40-52: sub-manager behaves as manager to its agents**).

53. Claim 6 rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino (US-5651006), Rozman (US-5438614) as applied to claim 3 above, and further in view of Chikenji (US-6639893).

54. As to claim 6: Fujino teaches the method according to claim 3 ... intermediate objects (**fig.1, fig.2: sub-managers**).

55. Fujino may not explicitly teach which comprises the steps of providing a plurality of said intermediate objects (AG1, AG2) and managing at least one managed object (B3) through several intermediate objects (AG1, AG2) of said plurality.

56. Chikenji teaches which comprises the steps of providing a plurality of said ... objects (AG1, AG2) and managing at least one managed object (B3) through several ... objects (AG1, AG2) of said plurality (**fig.33, fig.34, col.46, ln.1-67: multiple SNMP managers**).

57. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Chikenji into Fujino since Fujino suggests SNMP sub-managers managing agents (**fig.1, fig.2**) in general and Chikenji

suggests multiple SNMP managers, the motivation being to provide back-up units in case of a fault (**fig.33, fig.34, col.46, ln.1-67: multiple SNMP managers**).

58. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino (US-5651006), Rozman (US-5438614) as applied to claim 3 above, and further in view of Osmond (US-6044468).

59. As to claim 9: Fujino teaches the method according to any claim 3 wherein said at least one intermediate object (AG) ... and - a working queue (L) for collecting messages inherent to said management activity performed by said at least one intermediate object (AG) on said at least one managed object (B1,Bn) (**col.6, ln.5-18, ln.55-58: MIB database contains management objects collected from agents**).

60. Fujino may not explicitly teach is provided with one of the following queues: - an input queue (i) for collecting input messages with respect to said at least one intermediate object (AG), - an output queue (U) for collecting output messages from said at least one intermediate object (AG).

61. Osmond teaches is provided with one of the following queues: - an input queue (i) for collecting input messages with respect to said at least one intermediate object (AG), - an output queue (U) for collecting output messages from said at least one intermediate object (AG) (**col.6, ln.20-32: SNMP manager with buffer for transmission and reception**).

62. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Osmond into Fujino since Fujino suggests an SNMP manager with a buffer (**col.22, ln.17**) in general and Osmond suggests an SNMP manager with a buffer performing transmission and reception, the motivation being to store messages beforehand to prevent jitter and dropping of packets and to streamline transmission and reception (**col.6, ln.20-32: SNMP manager with buffer for transmission and reception**).

63. As to claim 10: Fujino teaches the method according to claim 9, which comprises the step of providing, in said at least one intermediate object (AG), a dedicated module (DC) for analyzing the input messages received by said input queue (**col.7, ln.66—col.8, ln.5: sub-manager agent analyzes SNMP request**).

64. As to claim 11: Fujino teaches the method according to claim 10 which comprises the following steps: - providing, in said at least one intermediate object (AG), an activity co-ordinating module (CA) for implementing at least one of the following functions: - instantiating at least one concurrent process, - updating activity status of the requests in said working queue L, and - creating statistic check messages to be sent to said at least one manager object (A) through said output queue (U) (**col.15, ln.23-37: self-agent and sub-agent process SNMP requests in parallel**).

65. As to claim 12: Fujino teaches the method according to claim 9 which comprises the step of providing a plurality of protocol management modules (MPI, MP2, MP3) configured to establish communication to said at least one managed object {B1, BN} **(col.6, ln.59-67, col.15, ln.14-17, ln.38-48: communication with integration manager and agents using various modules such as communication control function and trap management function managing the exchange of SNMP messages)** through respective different protocols in said at least one intermediate object (AG) **(col.6, ln.59-67, col.15, ln.14-17, ln.38-48: SNMP).**

66. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino (US-5651006), Osmond (US-6044468), Rozman (US-5438614) as applied to claim 9 above, and further in view of Champlin (US-6519635).

67. As to claim 13: Fujino, Rozman, Osmond teach the method according to claim 9.

68. Fujino, Rozman, Osmond may not explicitly teach which comprises the step of establishing the communication between said at least one manager object (A) and said at least one intermediate object (AG) by subjecting at least one part of the respective messages to a compression operation {302; 104, 204}.

69. Champlin teaches which comprises the step of establishing the communication between said at least one manager object (A) and said at least one intermediate object (AG) by subjecting at least one part of the respective messages to a compression operation {302; 104, 204} **(fig.4, col.5, ln.11-27: compress SNMP PDUs).**

70. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Champin into Fujino since Fujino suggests SNMP managers and sub-managers (**fig.1, fig.2**) in general and Champin suggests SNMP managers and sub-managers compressing received data, the motivation being to store the data in such a way as to take up the least amount of space (**fig.4, col.5, ln.11-27: compress SNMP PDUs**).

71. **Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino (US-5651006), Osmond (US-6044468), Rozman (US-5438614), Champlin (US-6519635) as applied to claim 13 above, and further in view of Birdwell (US-6032197).**

72. As to claim 14: Fujino, Osmond, Champlin teach the method according to claim 13.

73. Fujino, Osmond, Champlin may not explicitly teach wherein said compression operation is based on the acknowledgment of a sequence which appears periodically in the message.

74. Birdwell teaches wherein said compression operation is based on the acknowledgment of a sequence which appears periodically in the message (**fig.4, fig.5, 56: compression indicator is periodic in that it appears in each message received**).

75. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Birdwell into Rozman since Rozman suggests UDP transmissions (**col.43, ln.54-59**) in general and Birdwell suggests flag indicating that a UDP packet is compressed, the motivation being to determine whether the packet should be decompressed (**col.7, ln.23-34**).

76. **Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino (US-5651006), Osmond (US-6044468), Rozman (US-5438614), Champlin (US-6519635) as applied to claim 14 above, and further in view of Dorward (US-6236341).**

77. As to claim 15: Fujino, Osmond, Rozman, Champlin teach the method according to claim 14.

78. Fujino, Osmond, Rozman, Champlin may not explicitly teach wherein said compression operation implements a gzip type method, such as zLib.

79. Dorward teaches wherein said compression operation implements a gzip type method, such as zLib (**col.3, ln.10-38, col.10, ln.59 – col.11, ln.16, col.12, ln.48 – col.13, ln.7: zlib to compress packets**).

80. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Dorward into Champlin since Champlin suggests PDU compression (**fig.4, col.5, ln.11-27: compress SNMP PDUs**) in general and Dorward suggests PDU compression using zLib, the motivation being to

save costs by utilizing free software (**col.3, ln.10-38, col.10, ln.59 – col.11, ln.16, col.12, ln.48 – col.13, ln.7**).

81. Claim 16-19 rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino (US-5651006), Rozman (US-5438614) as applied to claim 2 above, and further in view of Birdwell (US-6032197).

82. As to claim 16: Fujino, Rozman teaches the method according to claim 2.

83. Fujino, Rozman may not explicitly teach which comprises the step of indicating that compression of the message transferred by UDP is done.

84. Birdwell teaches which comprises the step of indicating that compression of the message transferred by UDP is done (**fig.4, 56, fig.5, 56: UDP/IP packet with a compression flag indicating that the packet is full-length or reduced length**).

85. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Birdwell into Rozman since Rozman suggests UDP transmissions (**col.43, ln.54-59**) in general and Birdwell suggests flag indicating that a UDP packet is compressed, the motivation being to determine whether the packet should be decompressed (**col.7, ln.23-34**).

86. As to claim 17: Fujino, Rozman teach the method according to claim 16.

87. Fujino, Rozman may not explicitly teach in that wherein a bit field in the UDP header is used to indicate that the compression operation (302) is done

88. Birdwell teaches in that wherein a bit field in the UDP header is used to indicate that the compression operation (302) is done (**col.7, ln.23-34**).

89. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Birdwell into Rozman since Rozman suggests UDP transmissions (**col.43, ln.54-59**) in general and Birdwell suggests flag indicating that a UDP packet is compressed, the motivation being to determine whether the packet should be decompressed (**col.7, ln.23-34**).

90. As to claim 18: Fujino, Rozman, Birdwell teach the method according to claim 17 wherein bits comprised in the range from bit 62 to bit 69 in the UDP header are used in indicate that the compression operation (302) is done.

91. Examiner takes Official Notice that bits 62-69 are unused in the UDP protocol and was well known in the art at the time the invention was made for the purpose of allowing some overhead to overlay some signaling data so was to reduce bandwidth. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the unused bits within the UDP header for the purpose of notifying a node as to whether a packet is compressed or not compressed.

92. As to claim 19: Fujino, Rozman teaches the method according to claim 18.

93. Fujino, Rozman may not explicitly teach which comprises the step of setting at least one of the bits ... of the UDP message header to 1.

94. Birdwell teaches which comprises the step of setting at least one of the bits ... of the UDP message header to 1 (**fig.5, 56, fig.5, 56: reduced length packet set to 1**).

95. Birdwell may not explicitly teach bits from 62 to 69. Examiner takes Official Notice that bits 62-69 are unused in the UDP protocol and was well known in the art at the time the invention was made for the purpose of allowing some overhead to overlay some signaling data so was to reduce bandwidth. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the unused bits within the UDP header for the purpose of notifying a node as to whether a packet is compressed or not compressed.

96. Claim 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino (US-5651006), Rozman (US-5438614), Osmond (US-6044468), Champlin (US-6519635) as applied to claim 13 above, and further in view of Noy (US-6539540).

97. As to claim 20: Fujino teaches the method according to claim 13 wherein the communication between said at least one manager object (A) and said at least one intermediate object (AG) is implemented by means of SNMP messages (**abstract, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67 and fig.1, fig.2**).

98. Fujino may not explicitly teach and comprises the following steps during the compression step: - reading (100) the entire SNMP message, - encoding (102) the read message in hexadecimal 30 format, and - subjecting the message encoded in hexadecimal format to compression (104).

99. Noy teaches and comprises the following steps during the compression step: - reading (100) the entire SNMP message, - encoding (102) the read message in hexadecimal 30 format (**fig.2, col.1, ln.45 – col.2, ln.20: MIB information exchanged between SNMP nodes and encoded as a hexadecimal byte array**).

100. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Noy into Fujino since Fujino suggests an SNMP manager, sub-manager, and agent exchanging SNMP messages (**abstract, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67 and fig.1, fig.2**) in general and Noy suggests SNMP nodes encoding messages into hexadecimal byte arrays, the motivation being to perform a comparison and detect a byte level difference and conserve processing resources (**col.1, ln.45 – col.2, ln.20**).

101. Noy may not explicitly teach and - subjecting the message encoded in hexadecimal format to compression (104).

102. Champlin and - subjecting the message to compression (104) (**fig.4, col.5, ln.11-27: compress SNMP PDUs**).

103. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Champlin into Noy since Noy suggests encoding SNMP messages into hexadecimal byte arrays (**col.1, ln.45 – col.2, ln.20**) in general and Champin suggests SNMP managers and sub-managers compressing received SNMP data, the motivation being to store the data in such a way as to take up the least amount of space (**fig.4, col.5, ln.11-27: compress SNMP PDUs**).

104. Claims 21, 22, 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino (US-5651006), Rozman (US-5438614), Osmond (US-6044468), Champlin (US-6519635) as applied to claim 13 above, and further in view of Yoshino (US-20020052946).

105. As to claim 21: Fujino teaches the method according to claim 13 wherein communication between said at least one manager object (A) and said at least one intermediate object (AG) is implemented by means of SNMP messages (**abstract, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67 and fig.1, fig.2**).

106. Fujino may not explicitly teach comprises the following steps during the reception step: - subjecting the received message to decompression (204) complementary to said compression operation, to obtain a message subjected to decoding in hexadecimal format, - decoding (202) the message from the hexadecimal 10 format, and - reconstructing (200) the entire SNMP message from said decoded message.

107. Yoshino teaches subjecting the received message to decompression (204) complementary to said compression operation, to obtain a message (**[0059]: defrost SNMP packet**).

108. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Yoshino into Fujino since Fujino suggests transmitting SNMP messages in general (**abstract, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67 and fig.1, fig.2**) and Yoshino suggests compressing SNMP

messages and decompressing SNMP messages to obtain the original data, the motivation being to process the original data and increase bandwidth efficiency ([0059]: **defrost SNMP packet**).

109. Yoshino may not explicitly teach decoding (202) the message from the hexadecimal 10 format, and - reconstructing (200) the entire SNMP message from said decoded message.

110. Noy teaches decoding (202) the message from the hexadecimal 10 format, and - reconstructing (200) the entire SNMP message from said decoded message (**col.1, In.30-43, col.3, In.35-54: extract encoded information when a difference is found**).

111. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Noy into Fujino since Fujino suggests an SNMP manager, sub-manager, and agent exchanging SNMP messages (**abstract, col.2, In.60 - col.3, In.24 and col.6, In.55-67 and fig.1, fig.2**) in general and Noy suggests SNMP nodes encoding messages into hexadecimal byte arrays and extracting the messages from hexadecimal in the event of a difference resulting from the comparison, the motivation being to detect changes in the MIB information in the database of the SNMP agents and act upon such differences (**col.1, In.45 – col.2, In.20**).

112. As to claim 22: Fujinio teaches the method according to claim 21.

113. Fujino may not explicitly teach which comprises a nesting operation in a standard SNMP message for the transmission of the message subjected to said compression operation {104}.

114. Rozman teaches which comprises a nesting operation in a standard SNMP message for the transmission of the message (**col.43, ln.54-59: SNMP nested into UDP**).

115. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Rozman into Fujino since Fujino suggests SNMP nodes communicating using SNMP messages (**fig.1, fig.2**) in general and Fujino suggests SNMP transmitted over UDP, the motivation being to provide for better interoperability (**col.43, ln.54-59: SNMP over UDP**).

116. Rozman may not explicitly teach message subjected to said compression operation.

117. Yoshino teaches teach message subjected to said compression operation (**[0056]: SNMP message subject to compression operation**).

118. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Yoshino into Fujino since Fujino suggests transmitting SNMP messages in general (**abstract, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67 and fig.1, fig.2**) and Yoshino suggests compressing SNMP messages and decompressing SNMP messages to obtain the original data, the motivation being to increase bandwidth efficiency (**[0056], [0059]: compress SNMP packet for transmission**).

119. As to claim 25: Fujino teaches the method according to 21.

120. Fujino may not explicitly teach which comprises the step of integrating the message subjected to said compression operation {104} through UDP nesting for the transmission of the message subjected to said compression operation {104}.

121. Rozman teaches which comprises the step of integrating the message ... operation {104} through UDP nesting for the transmission of the message (**col.43, In.54-59: SNMP nested into UDP**).

122. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Rozman into Fujino since Fujino suggests SNMP nodes communicating using SNMP messages (**fig.1, fig.2**) in general and Fujino suggests SNMP transmitted over UDP, the motivation being to provide for better interoperability (**col.43, In.54-59: SNMP over UDP**).

123. Rozman may not explicitly teach message subjected to said compression operation {104}.

124. Yoshino teaches teach message subjected to said compression operation (**[0056]: SNMP message subject to compression operation**).

125. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Yoshino into Fujino since Fujino suggests transmitting SNMP messages in general (**abstract, col.2, In.60 - col.3, In.24 and col.6, In.55-67 and fig.1, fig.2**) and Yoshino suggests compressing SNMP messages and decompressing SNMP messages to obtain the original data, the

motivation being to increase bandwidth efficiency ([0056], [0059]: **compress SNMP packet for transmission**).

126. As to claim 26: Fujino teaches the method according to claim 25.

127. Fujino may not explicitly teach which comprises the following steps during transmission: - configuring said message ... as a Protocol Data Unit (PDU) payload, and - transferring the payload created in this way to a given receiver port.

128. Rozman teaches which comprises the following steps during transmission: - configuring said message ... as a Protocol Data Unit (PDU) payload, and - transferring the payload created in this way to a given receiver port (**col.43, ln.54-59: SNMP nested into UDP**).

129. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Rozman into Fujino since Fujino suggests SNMP nodes communicating using SNMP messages (**fig.1, fig.2**) in general and Fujino suggests SNMP transmitted over UDP, the motivation being to provide for better interoperability (**col.43, ln.54-59: SNMP over UDP**).

130. Rozman may not explicitly teach message subjected to said compression operation (104).

131. Yoshino teaches message subjected to said compression operation (104) (**[0056]: SNMP message subject to compression operation**).

132. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Yoshino into Fujino since Fujino

suggests transmitting SNMP messages in general (**abstract, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67 and fig.1, fig.2**) and Yoshino suggests compressing SNMP messages and decompressing SNMP messages to obtain the original data, the motivation being to increase bandwidth efficiency (**[0056], [0059]: compress SNMP packet for transmission**).

133. As to claim 27: Fujino teaches the method according to claim 26.

134. Fujino may not explicitly teach which comprises the following steps during reception: - receiving said message as a payload of a PDU UDP received at a receiver port, and - extracting said payload from said PDU.

135. Rozman teaches which comprises the following steps during reception: - receiving said message as a payload of a PDU UDP received at a receiver port (**col.43, ln.54-59: SNMP nested into UDP**).

136. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Rozman into Fujino since Fujino suggests SNMP nodes communicating using SNMP messages (**fig.1, fig.2**) in general and Fujino suggests SNMP transmitted over UDP, the motivation being to provide for better interoperability (**col.43, ln.54-59: SNMP over UDP**).

137. Rozman may not explicitly teach and - extracting said payload from said PDU.

138. Examiner takes Official Notice that extracting said payload from said PDU was well known in the art at the time the invention was made for the purpose of obtaining data encapsulated in the PDU. It would have been obvious to one of ordinary skill in the

art at the time the invention was made to de-capsulate the SNMP message having been encapsulated into the UDP PDU in order to obtain the SNMP message and act upon its contents.

139. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino (US-5651006), Rozman (US-5438614), Osmond (US-6044468), Champlin (US-6519635), Yoshino (US-20020052946) as applied to claim 22 above, and further in view of Nishio (US-20010044822), Noy (US-6539540), Bossi (US-6421425), Rodriguez (US-20020029228).

140. As to claim 23: Fujino teaches the method according to claim 22.

141. Fujino may not explicitly teach which comprises the following steps during transmission: - reading (108) the message subjected to said compression operation (104) in bytes and transposing (110) it into a corresponding ASCII character message, - generating (112) a variable binding set comprising a first OID indicating the original file size and subsequent OID/value pairs which carry portions of said message subjected to said compression operation (104) transposed into ASCII characters, - reconstructing SNMP message header data, - encoding (114) the resulting SNMP message in hexadecimal format to generate the UDP payload, and transferring (116) the UDP payload generated in this way.

142. Bossi teaches which comprises the following steps during transmission: - reading (108) the message ... and transposing (110) it into a corresponding ASCII character message (**Bossi, col.4, ln.1-24, col.5, ln.41-60: convert to ASCII and packetize**).

143. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Bossi into Fujino since Fujino suggests transmission of packets between network elements (**fig.2, 10, 20, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67**) in general and Bossi suggests transmission of packets between network elements where the data is encoded into ASCII for transmission after which it is decoded from ASCII, the motivation being to convert data into a format that is transportable over the internet and then to convert the data back into its original format to be processed by a system (**col.4, ln.1-24, col.5, ln.41-60, col.5, ln.61 – col.6, ln.2: convert to ASCII and packetize**).

144. Bossi may not explicitly teach generating (112) a ... set comprising a first ... indicating the original file size.

145. Rodriguez teaches - generating (112) a ... set comprising a first ... indicating the original file size (**Rodriguez, [0007]: indication of original, uncompressed file size**).

146. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Rodriguez into Yoshinio since Yoshino suggests compression of data (**[0056], [0059]: compress / decompress SNMP packet for transmission**) in general and Rodriguez suggests an indicator containing information regarding the initial size of the file, the motivation being to keep a record with which to compare with the result of a future decompress operation (**[0007]**).

147. Bossi and Rodriguez may not explicitly teach and subsequent OID/value pairs which carry portions of said message subjected to said compression operation (104).

148. Nishio teaches and subsequent OID/value pairs which carry portions of said message subjected to said compression operation (104) **(Nishio, fig.6, [0073-0075], [0101]: series of OID / value pairs).**

149. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Nishio into Fujino since Fujino suggests network elements exchanging SNMP messages (**fig.2, 10, 20, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67**) in general and Nishio suggests assembling SNMP messages with variable bindings, the motivation being to search MIB databases and acquire address information of an address (**fig.9, [0073-0079], [0084], [0101]**).

150. Bossi, Rodriguez, and Nishio may not explicitly teach - reconstructing SNMP message header data, - encoding (114) the resulting SNMP message in hexadecimal format.

151. Noy teaches - reconstructing SNMP message header data, - encoding (114) the resulting SNMP message in hexadecimal format **(Noy, fig.2, col.1, ln.45 – col.2, ln.20, col.1, ln.30-43, col.3, ln.35-54: MIB information exchanged between SNMP nodes and encoded / decoded as a hexadecimal byte array).**

152. Bossi, Rodriguez, Nishio, and Noy may not explicitly teach to generate the UDP payload, and transferring (116) the UDP payload generated in this way.

153. Rozman teaches to generate the UDP payload, and transferring (116) the UDP payload generated in this way (**Rozman, col.43, ln.54-59: SNMP nested into UDP and transmitted**).

154. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Rozman into Fujino since Fujino suggests SNMP nodes communicating using SNMP messages (**fig.1, fig.2**) in general and Fujino suggests SNMP transmitted over UDP, the motivation being to provide for better interoperability (**col.43, ln.54-59: SNMP over UDP**).

155. As to claim 24: Fujino teaches the method according to 23

156. Fujino may not explicitly teach which comprises the following steps during reception: - receiving the message subjected to said compression operation as an UDP payload (216), - subjecting the payload received in this way to a hexadecimal decoding operation (214), - acknowledging and assembling {212} the variable binding of the message subjected to hexadecimal decoding, - subjecting the message subjected to said acknowledging and assembling operation (212) to binary ASCII decoding (210), and - subjecting the decoded message in binary form to said decompression operation (204).

157. Yoshino teaches which comprises the following steps during reception: - receiving the message subjected to said compression (**[[0056]: SNMP message subject to compression operation)** ... and - subjecting the ... message in binary form to said decompression operation (204) (**[[0059]: defrost SNMP packet)**.

158. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Yoshino into Fujino since Fujino suggests transmitting SNMP messages in general (**abstract, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67 and fig.1, fig.2**) and Yoshino suggests compressing SNMP messages and decompressing SNMP messages to obtain the original data, the motivation being to increase bandwidth efficiency (**[0056], [0059]: compress / decompress SNMP packet for transmission**).

159. Yoshino may not explicitly teach operation as an UDP payload (216).

160. Rozman teaches operation as an UDP payload (216) (**col.43, ln.54-59: SNMP nested into UDP**).

161. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Rozman into Fujino since Fujino suggests SNMP nodes communicating using SNMP messages (**fig.1, fig.2**) in general and Fujino suggests SNMP transmitted over UDP, the motivation being to provide for better interoperability (**col.43, ln.54-59: SNMP over UDP**).

162. Yoshino and Rozman may not explicitly teach - subjecting the payload received in this way to a hexadecimal decoding operation.

163. Noy teaches - subjecting the payload received in this way to a hexadecimal decoding operation (214) (**col.1, ln.30-43, col.3, ln.35-54: extract encoded information when a difference is found**).

164. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Noy into Fujino since Fujino

suggests an SNMP manager, sub-manager, and agent exchanging SNMP messages (**abstract, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67 and fig.1, fig.2**) in general and Noy suggests SNMP nodes encoding messages into hexadecimal byte arrays and extracting the messages from hexadecimal in the event of a difference resulting from the comparison, the motivation being to detect changes in the MIB information in the database of the SNMP agents and act upon such differences (**col.1, ln.45 – col.2, ln.20**).

165. Yoshino, Rozman, and Noy may not explicitly teach - acknowledging and assembling {212} the variable binding of the message.

166. Nishio teaches - acknowledging and assembling {212} the variable binding of the message ([0073-0077]: construct packet with variable bindings).

167. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Nishio into Fujino since Fujino suggests network elements exchanging SNMP messages (**fig.2, 10, 20, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67**) in general and Nishio suggests assembling SNMP messages with variable bindings, the motivation being to search MIB databases and acquire address information of an address (**fig.9, [0073-0079], [0084], [0101]**).

168. Yoshino, Rozman, Noy, and Nishio may not explicitly teach - subjecting the message subjected to said acknowledging and assembling operation (212) to binary ASCII decoding (210).

169. Bossi teaches - subjecting the message subjected to said acknowledging and assembling operation (212) to binary ASCII decoding (210) (**col.5, ln.61 – col.6, ln.2: de-packetize and convert ASCII into another format for processing**).

170. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Bossi into Fujino since Fujino suggests transmission of packets between network elements (**fig.2, 10, 20, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67**) in general and Bossi suggests transmission of packets between network elements where the data is encoded into ASCII for transmission after which it is decoded from ASCII, the motivation being to convert data into a format that is transportable over the internet and then to convert the data back into its original format to be processed by a system (**col.4, ln.1-24, col.5, ln.41-60, col.5, ln.61 – col.6, ln.2: convert to ASCII and packetize**).

171. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino (US-5651006), Rozman (US-5438614), Osmond (US-6044468), Champlin (US-6519635), Yoshino (US-20020052946) as applied to claim 27 above, and further in view of Takahashi (US-20020188708).

172. As to claim 28: Fujino teaches the method according to claim 27.

173. Fujino may not explicitly teach which comprises the step of transmitting a synchronisation message (1106) of the SNMP type indicating said transmission port

and/or said reception port between said at least one manager object (A) and said at least one intermediate object (AG).

174. Takahashi teaches which comprises the step of transmitting a synchronisation message (1106) of the SNMP type indicating said transmission port and/or said reception port between said at least one manager object (A) and said at least one intermediate object (AG) (**fig.3: manager and intermediate objects exchange interface information**).

175. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Takahashi into Fujino since Fujino suggests SNMP agents and managers in communication with each other (**fig.2, 10, 20, col.2, ln.60 - col.3, ln.24 and col.6, ln.55-67** in general and Takahashi suggests SNMP agents and managers exchanging interface information with each other, the motivation being to collect information from the agents, register agents that are candidates for management, and produce a screen of a network composition (**[0006-0009]**).

176. Conclusion

177. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW OH whose telephone number is (571)270-5273. The examiner can normally be reached on M-F 8:30AM - 5AM EST.

178. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Ryman can be reached on (571)272-3152. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

179. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

180.

181.

182. /Andrew Oh/

183. Examiner, Art Unit 2419

/Daniel J. Ryman/

Supervisory Patent Examiner, Art Unit 2419